



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R05-OAR-2011-0329; FRL-9622-9]

**Approval and Promulgation of Air Quality Implementation Plans;
Ohio; Regional Haze**

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing a limited approval of revisions to the Ohio State Implementation Plan (SIP) addressing regional haze for the first implementation period. Ohio submitted its regional haze plan on March 11, 2011. The Ohio regional haze plan addresses Clean Air Act (CAA) and Regional Haze Rule (RHR) requirements for states to remedy any existing and prevent future anthropogenic impairment of visibility at mandatory Class I areas caused by emissions of air pollutants from numerous sources located over a wide geographic area, also referred to as the "regional haze program". States are required to assure reasonable progress toward the national goal of achieving natural visibility conditions in Class I areas. EPA is proposing a limited approval of these SIP revisions to implement the regional haze requirements for Ohio on the basis that the revisions, as a whole, strengthen the Ohio SIP. In a separate action, EPA has previously proposed a limited disapproval of the Ohio regional haze SIP because of deficiencies in the state's

regional haze SIP submittal arising from the remand by the U.S. Court of Appeals for the District of Columbia (D.C. Circuit) to EPA of the Clean Air Interstate Rule (CAIR). Consequently, we are not taking action in this notice to address the state's reliance on CAIR to meet certain regional haze requirements.

DATES: Comments must be received on or before **[insert date 30 days after publication in the Federal Register]**.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R05-OAR-2011-0329, by one of the following methods:

1. www.regulations.gov: Follow the on-line instructions for submitting comments.
2. E-mail: blakley.pamela@epa.gov.
3. Fax: (312) 692-2450.
4. Mail: Pamela Blakley, Chief, Control Strategies Section, Air Programs Branch (AR-18J), U.S. Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, Illinois 60604.
5. Hand Delivery: Pamela Blakley, Chief, Control Strategies Section, Air Programs Branch (AR-18J), U.S. Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, Illinois 60604. Such deliveries are only accepted during the Regional Office normal hours of operation, and special arrangements should be made for deliveries of boxed information. The Regional Office official hours of

business are Monday through Friday, 8:30 AM to 4:30 PM, excluding Federal holidays.

Instructions: Direct your comments to Docket ID No.

EPA-R05-OAR-2011-0329. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through www.regulations.gov or e-mail. The www.regulations.gov website is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through www.regulations.gov your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification,

EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional instructions on submitting comments, go to Section I of the SUPPLEMENTARY INFORMATION section of this document.

Docket: All documents in the docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at the Environmental Protection Agency, Region 5, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. This facility is open from 8:30 AM to 4:30 PM, Monday through Friday, excluding Federal holidays. We recommend that you telephone Matt Rau, Environmental Engineer, at (312) 886-6524 before visiting the Region 5 office.

FOR FURTHER INFORMATION CONTACT: Matt Rau, Environmental Engineer, Control Strategies Section, Air Programs Branch (AR-18J), Environmental Protection Agency, Region 5, 77 West

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SUPPLEMENTARY INFORMATION: Throughout this document whenever
"we," "us," or "our" is used, we mean EPA.

TABLE OF CONTENTS

- I. What Should I Consider as I Prepare My Comments for EPA?
- II. What is the Background for EPA's Proposed Action?
- III. What Are the Requirements for Regional Haze SIPs?
- IV. What is EPA's Analysis of Ohio's Regional Haze Plan?
- V. What Action is EPA Taking?
- VI. Statutory and Executive Order Reviews.

I. What Should I Consider as I Prepare My Comments for EPA?

When submitting comments, remember to:

- 1. Identify the rulemaking by docket number and other identifying information (subject heading, Federal Register date and page number).
- 2. Follow directions - EPA may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.
- 3. Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.
- 4. Describe any assumptions and provide any technical information and/or data that you used.

5. If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
6. Provide specific examples to illustrate your concerns, and suggest alternatives.
7. Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
8. Make sure to submit your comments by the comment period deadline identified.

II. What is the Background for EPA's Proposed Action?

A. The Regional Haze Problem

Regional haze is visibility impairment that is produced by a multitude of sources and activities that are located across a broad geographic area and emit fine particles ($PM_{2.5}$) (e.g., sulfates, nitrates, organic particles, elemental carbon, and soil dust) and its precursors- sulfur dioxide (SO_2), nitrogen oxides (NO_x), and in some cases ammonia (NH_3) and volatile organic compound (VOCs). Fine particle precursors react in the atmosphere to form fine particulate matter. Aerosol $PM_{2.5}$ impairs visibility by scattering and absorbing light. Visibility impairment reduces the clarity and distance one can see. $PM_{2.5}$ can also cause serious health effects and mortality

in humans and contributes to environmental effects such as acid deposition and eutrophication.

Data from the existing visibility monitoring network, the "Interagency Monitoring of Protected Visual Environments" (IMPROVE) monitoring network, show that visibility impairment caused by air pollution occurs virtually all the time at most national park and wilderness areas. The average visual range, the distance at which an object is barely discernable, in many Class I areas¹ in the western United States is 100-150 kilometers. That is about one-half to two-thirds of the visual range that would exist without anthropogenic air pollution. In the eastern and Midwestern Class I areas of the United States, the average visual range is generally less than 30 kilometers, or about one-fifth of the visual range that would exist under estimated natural conditions. See 64 FR 35715 (July 1, 1999).

B. Requirements of the CAA and EPA's RHR

¹ Areas designated as mandatory Class I Federal areas consist of national parks exceeding 6000 acres, wilderness areas and national memorial parks exceeding 5000 acres, and all international parks that were in existence on August 7, 1977. 42 U.S.C. 7472(a). In accordance with section 169A of the CAA, EPA, in consultation with the Department of Interior, promulgated a list of 156 areas where visibility is identified as an important value. 44 FR 69122 (November 30, 1979). The extent of a mandatory Class I area includes subsequent changes in boundaries, such as park expansions. 42 U.S.C. 7472(a). Although states and tribes may designate as Class I additional areas which they consider to have visibility as an important value, the requirements of the visibility program set forth in section 169A of the CAA apply only to "mandatory Class I Federal areas." Each mandatory Class I Federal area is the responsibility of a Federal Land Manager. 42 U.S.C. 7602(i). When we use the term "Class I area," we mean a "mandatory Class I Federal area."

In section 169A of the 1977 Amendments to the CAA, Congress created a program for protecting visibility in the nation's national parks and wilderness areas. This section of the CAA establishes as a national goal the "prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas which impairment results from manmade air pollution." On December 2, 1980, EPA promulgated regulations to address visibility impairment in Class I areas that is "reasonably attributable" to a single source or small group of sources known as, "reasonably attributable visibility impairment" (RAVI). 45 FR 80084. These regulations, codified at 40 CFR part 50, subpart P, represented the first phase in addressing visibility impairment. EPA deferred action on regional haze that emanates from a variety of sources until monitoring, modeling, and scientific knowledge about the relationships between pollutants and visibility impairment were improved.

Congress added section 169B to the CAA in 1990 to address regional haze issues. EPA promulgated a rule to address regional haze, the RHR, on July 1, 1999 (64 FR 35713). The RHR, which amends 40 CFR part 50, subpart P, revised the existing visibility regulations to integrate into the regulation provisions addressing regional haze impairment and established a

comprehensive visibility protection program for Class I areas. The subpart P requirements for regional haze, found at 40 CFR 51.308 and 51.309, are included in EPA's visibility protection regulations at 40 CFR 51.300-309. Some of the main elements of the regional haze requirements are summarized in section III. The requirement to submit a regional haze SIP applies to all 50 states, the District of Columbia, and the Virgin Islands².

C. Roles of Agencies in Addressing Regional Haze

Successful implementation of the regional haze program will require long-term regional coordination among states, tribal governments, and various federal agencies. Pollution affecting the air quality in Class I areas can be transported over long distances, even hundreds of kilometers. Therefore, effectively addressing the problem of visibility impairment in Class I areas means that states need to develop coordinated strategies that take into account the effect of emissions from one jurisdiction on the air quality in another state.

EPA has encouraged the states and tribes to address visibility impairment from a regional perspective because the pollutants that lead to regional haze can originate from sources located across broad geographic areas. Five regional planning

² Albuquerque/Bernalillo County in New Mexico must also submit a regional haze SIP to completely satisfy the requirements of section 110(a)(2)(D) of the CAA for the State of New Mexico under the New Mexico Air Quality Control Act (section 74-2-4).

organizations (RPOs) were developed to address regional haze and related issues. The RPOs first evaluated technical information to better understand how their states and tribes impact Class I areas across the country and then pursued the development of regional strategies to reduce PM_{2.5} emissions and other pollutants leading to regional haze.

The Midwest RPO (MRPO) is a collaborative effort of state governments and various federal agencies established to initiate and coordinate activities associated with the management of regional haze, visibility and other air quality issues in the Midwest. The member states are Illinois, Indiana, Michigan, Ohio, and Wisconsin.

III. What Are the Requirements for Regional Haze SIPs?

Regional haze SIPs must assure reasonable progress towards the national goal of achieving natural visibility conditions in Class I areas. Section 169A of the CAA and EPA's implementing regulations require states to establish long-term strategies for making reasonable progress toward meeting this goal. Plans must also give specific attention to certain stationary sources that were in existence on August 7, 1977, but were not in operation before August 7, 1962, and require those sources to install best available retrofit technology (BART) reducing visibility

impairment. The specific regional haze SIP requirements are discussed in further detail below.

A. Determination of Baseline, Natural, and Current Visibility Conditions

The RHR establishes the deciview³ (dv) as the principal metric or unit for expressing visibility impairment. This visibility metric expresses uniform proportional changes in haziness in terms of common increments across the entire range of visibility conditions, from pristine to extremely hazy conditions. Visibility expressed in deciview is determined by using air quality measurements to estimate light extinction and then transforming the value of light extinction using a logarithm function. The deciview is a more useful measure for tracking progress in improving visibility than light extinction itself because each deciview change is an equal incremental change in visibility perceived by the human eye. Most people can detect a change in visibility at one deciview.

The deciview is used in expressing reasonable progress goals (RPGs), defining baseline, current, and natural conditions, and tracking changes in visibility. The regional haze SIPs must contain measures that ensure "reasonable

³ The preamble to the RHR provides additional details about the deciview. 64 FR 35714, 35725 (July 1, 1999).

progress" toward the national goal of preventing and remedying visibility impairment in Class I areas caused by anthropogenic air pollution. The national goal is a return to natural conditions such that anthropogenic sources of air pollution would no longer impair visibility in Class I areas.

To track changes in visibility over time at each of the 156 Class I areas covered by the visibility program (40 CFR 81.401-437) and as part of the process for determining reasonable progress, states must calculate the degree of existing visibility impairment at each Class I area at the time of each regional haze SIP is submitted and at the progress review every five years, midway through each 10-year implementation period. The RHR requires states with Class I areas (Class I states) to determine the degree of impairment in deciviews for the average of the 20 percent least impaired (best) and 20 percent most impaired (worst) visibility days over a specified time period at each of its Class I areas. Each state must also develop an estimate of natural visibility conditions for the purpose of comparing progress toward the national goal. Natural visibility is determined by estimating the natural concentrations of pollutants that cause visibility impairment and then calculating total light extinction based on those estimates. EPA has provided guidance to states regarding how to calculate baseline,

natural, and current visibility conditions in documents titled, EPA's *Guidance for Estimating Natural Visibility conditions under the Regional Haze Rule*, September 2003, (EPA-454/B-03-005 located at

http://www.epa.gov/ttncaaa1/t1/memoranda/rh_envcurhr_gd.pdf)

(hereinafter referred to as "EPA's 2003 Natural Visibility Guidance") and *Guidance for Tracking Progress Under the Regional Haze Rule* (EPA-454/B-03-004 September 2003 located at

http://www.epa.gov/ttncaaa1/t1/memoranda/rh_tpurhr_gd.pdf))

(hereinafter referred to as "EPA's 2003 Tracking Progress Guidance").

For the first regional haze SIP, due December 17, 2007, the "baseline visibility conditions" are the starting points for assessing "current" visibility impairment. Baseline visibility conditions represent the degree of visibility impairment for the 20 percent best days and 20 percent worst days for each calendar year from 2000 to 2004. Using monitoring data for 2000 through 2004, states are required to calculate the average degree of visibility impairment for each Class I area, based on the average of annual values over the five-year period. The comparison of initial baseline visibility conditions to natural visibility conditions indicates the amount of improvement necessary to attain natural visibility, while comparisons of

future conditions against baseline conditions will indicate the amount of progress made. In general, the 2000 to 2004 baseline period is considered the time from which improvement in visibility is measured.

B. Determination of Reasonable Progress Goals

The vehicle for ensuring continuing progress towards achieving the natural visibility goal is the submission of a series of regional haze SIPs from the states that establish two distinct RPGs, one for the best days and one for the worst days for every Class I area for each approximately 10-year implementation period. The RHR does not mandate specific milestones or rates of progress, but instead calls for states to establish goals that provide for "reasonable progress" toward achieving natural visibility conditions. In setting RPGs, a state with a mandatory Class I area (Class I state) must provide for an improvement in visibility for the worst days over the approximately 10-year period of the SIP and ensure no degradation in visibility for the best days.

Class I states have significant discretion in establishing RPGs, but are required to consider the following factors established in section 169A of the CAA and in EPA's RHR at 40 CFR 51.308(d)(1)(i)(A): (1) the costs of compliance; (2) the time necessary for compliance; (3) the energy and non-air

quality environmental impacts of compliance; and (4) the remaining useful life of any potentially affected sources. The states must demonstrate in their SIPs how these factors are considered when selecting the RPGs for the best and worst days for each applicable Class I area. States have considerable flexibility in how they take these factors into consideration, as noted in EPA's *Guidance for Setting Reasonable Progress Goals under the Regional Haze Program*, ("EPA's Reasonable Progress Guidance"), July 1, 2007, memorandum from William L. Wehrum, Acting Assistant Administrator for Air and Radiation, to EPA Regional Administrators, EPA Regions 1-10 (pp.4-2, 5-1). In setting the RPGs, states must also consider the rate of progress needed to reach natural visibility conditions by 2064 ("uniform rate of progress" or "glide path") and the emissions reduction needed to achieve that rate of progress over the approximately 10-year period of the SIP. In setting RPGs, each Class I state must also consult with potentially contributing states, i.e. those states that may affect visibility impairment at the Class I state's areas. 40 CFR 51.308(d)(1)(iv).

C. Best Available Retrofit Technology

Section 169A of the CAA directs states to evaluate the use of retrofit controls at certain older large stationary sources to address visibility impacts from these sources. Specifically,

CAA section 169A(b)(2)(A) requires states to revise their SIPs to contain such measures as may be necessary to make reasonable progress towards the natural visibility goal including a requirement that certain categories of existing major stationary sources built between 1962 and 1977 procure, install, and operate BART as determined by the state. The set of "major stationary sources" potentially subject to BART is listed in CAA section 169A(g)(7).

On July 6, 2005, EPA published the *Guidelines for BART Determinations Under the Regional Haze Rule* at Appendix Y to 40 CFR Part 51 (BART Guidelines) to assist states in determining which of their sources should be subject to the BART requirements and in determining appropriate emission limits for each applicable source. A state must use the approach in the BART Guidelines in making a BART determination for a fossil fuel-fired electric generating units (EGU) with total generating capacity in excess of 750 megawatts. States are encouraged, but not required, to follow the BART Guidelines in making BART determinations for other sources.

States must address all visibility-impairing pollutants emitted by a source in the BART determination process. The most significant visibility impairing pollutants are SO₂, NO_x, and PM. EPA has stated that states should use their best judgment in

determining whether VOC or NH₃ emissions impair visibility in Class I areas.

States may select an exemption threshold value for their BART modeling under the BART Guidelines, below which a BART-eligible source may be considered to have a small enough contribution to visibility impairment in any Class I area to warrant being exempted from the BART requirement. The state must document this exemption threshold value in the SIP and must state the basis for its selection of that value. The exemption threshold set by the state should not be higher than 0.5 dv. Any source with emissions that model above the threshold value would be subject to a BART determination review. The BART Guidelines acknowledge varying circumstances affecting different Class I areas. States should consider the number of emission sources affecting the Class I areas at issue and the magnitude of the individual source's impact.

The state must identify potential BART sources in its SIP, described as "BART-eligible sources" in the RHR, and document its BART control determination analyses. In making BART determinations, section 169A(g)(2) of the CAA requires the state to consider the following factors: (1) the costs of compliance; (2) the energy and non-air quality environmental impacts of compliance; (3) any existing pollution control technology in use

at the source; (4) the remaining useful life of the source; and (5) the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.

A regional haze SIP must include source-specific BART emission limits and compliance schedules for each source subject to BART. The BART controls must be installed and in operation as expeditiously as practicable, but no later than five years after the date of EPA approval of the state's regional haze SIP. CAA section 169(g)(4); 40 CFR 51.308(e)(1)(iv). In addition to what is required by the RHR, general SIP requirements mandate that the SIP must also include all regulatory requirements related to monitoring, recordkeeping, and reporting for the BART controls on the source.

The RHR also allows states to implement an alternative program in lieu of BART only if the alternative program can be demonstrated to achieve greater progress toward the national visibility goal than implementing BART controls. EPA made such a demonstration for CAIR under regulations issued in 2005 revising the regional haze program. 70 FR 39104 (July 6, 2005). EPA's regulations provided that states participating in the CAIR trading program under 40 CFR part 96 pursuant to an EPA-approved CAIR SIP or which remain subject to the CAIR Federal Implementation Plan (FIP) in 40 CFR part 97 need not require

affected BART-eligible EGUs to install, operate, and maintain BART for emissions of SO₂ and NO_x. 40 CFR 51.308(e)(4). CAIR is not applicable to emissions of PM, so states were still required to conduct a BART analysis for PM emissions from EGUs subject to BART for that pollutant.

CAIR was later found to be inconsistent with the requirements of the CAA and the rule was remanded to EPA. See *North Carolina v. EPA*, 550 F.3d 1176 (D.C. Cir. 2008). The court left CAIR in place until the Agency replaced it. *Id.* EPA replaced CAIR with the Transport Rule in August 2011.

On December 30, 2011, EPA proposed to find that the trading programs in the Transport Rule would achieve greater reasonable progress towards the national goal than would be obtained by implementing BART for SO₂ and NO_x for BART-subject EGUs in the area subject to the Transport Rule. 76 FR 82219. Based on the proposed finding, EPA also proposed to revise the RHR to allow states, including Ohio, to meet the requirements of an alternative program in lieu of BART by participation in the trading programs under the Transport Rule. EPA has not taken final action on that rule.

D. Long-Term Strategy (LTS)

Consistent with the requirement in section 169A(b) of the CAA that states include in their regional haze SIP a 10 to 15

year strategy for making reasonable progress, section 51.308(d)(3) of the RHR requires that states include a LTS in their regional haze SIPs. The LTS is the compilation of all control measures a state will use during the implementation period of the specific SIP submission to meet applicable RPGs. The LTS must include enforceable emissions limitations, compliance schedules, and other measures as necessary to achieve the RPGs for all Class I areas within or affected by emissions from the state. 40 CFR 51.308(d)(3).

When a state's emissions are reasonably anticipated to cause or contribute to visibility impairment in a Class I area located in another state, the RHR requires the impacted state to coordinate with the contributing states in order to develop coordinated emissions management strategies. 40 CFR 51.308(d)(3)(i). In such cases, the contributing state must demonstrate that it has included in its SIP all measures necessary to obtain its share of the emission reductions needed to meet the RPGs for the Class I area. The RPOs have provided forums for significant interstate consultation, but additional consultations between states may be required to address interstate visibility issues sufficiently.

States should consider all types of anthropogenic sources of visibility impairment in developing their LTS, including

stationary, minor, mobile, and area sources. At a minimum, states must describe how each of the following seven factors listed below are taken into account in developing their LTS. The seven factors are: (1) emission reductions due to ongoing air pollution control programs, including measures to address RAVI; (2) measures to mitigate the impacts of construction activities; (3) emissions limitations and schedules for compliance to achieve the RPG; (4) source retirement and replacement schedules; (5) smoke management techniques for agricultural and forestry management purposes including plans as currently exist within the state for these purposes; (6) enforceability of emissions limitations and control measures; and (7) the anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the LTS. 40 CFR 51.308(d)(3)(v).

E. Coordinating Regional Haze and RAVI LTS

As part of the RHR, EPA revised 40 CFR 51.306(c), regarding the LTS for RAVI, to require that the RAVI plan must provide for a periodic review and SIP revision not less frequently than every three years until the date of submission of the state's first plan addressing regional haze visibility impairment in accordance with 40 CFR 51.308(b) and (c). The state must revise its plan to provide for review and revision of a coordinated LTS

for addressing RAVI and regional haze on or before this date. It must also submit the first such coordinated LTS with its first regional haze SIP. Future coordinated LTSS, and periodic progress reports evaluating progress towards RPGs, must be submitted consistent with the schedule for SIP submission and periodic progress reports set forth in 40 CFR 51.308(f) and 51.308(g), respectively. The periodic review of a state's LTS must be submitted to EPA as a SIP revision and report on both regional haze and RAVI impairment.

F. Monitoring Strategy and Other Implementation Plan

Requirements

40 CFR Section 51.308(d)(4) includes the requirement for a monitoring strategy for measuring, characterizing, and reporting of regional haze visibility impairment that is representative of all mandatory Class I areas within the state. The strategy must be coordinated with the monitoring strategy required in section 51.305 for RAVI. Compliance with this requirement may be met through participation in the IMPROVE network, meaning that the state reviews and uses monitoring data from the network. The monitoring strategy must also provide for additional monitoring sites if the IMPROVE network is not sufficient to determine whether RPGs will be met. The monitoring strategy is due with the first regional haze SIP and it must be reviewed every five

years.

The SIP must also provide for the following:

- Procedures for using monitoring data and other information in a state with mandatory Class I areas to determine the contribution of emissions from within the state to regional haze visibility impairment at Class I areas both within and outside the state;
- Procedures for using monitoring data and other information in a state with no mandatory Class I areas to determine the contribution of emissions from within the state to regional haze visibility impairment at Class I areas in other states;
- Reporting of all visibility monitoring data to the Administrator at least annually for each Class I area in the state, and where possible in electronic format;
- A statewide inventory of emissions of pollutants that are reasonably anticipated to cause or contribute to visibility impairment in any Class I area. The inventory must include emissions for a baseline year, emissions for the most recent year with available data, and future projected emissions. A state must also make a commitment to update the inventory periodically; and

- Other elements including reporting, recordkeeping, and other measures necessary to assess and report on visibility;

The RHR requires control strategies to cover an initial implementation period extending to the year 2018 with a comprehensive reassessment and revision of those strategies, as appropriate, every 10 years thereafter. Periodic SIP revisions must meet the core requirements of section 51.308(d) with the exception of BART. The requirement to evaluate sources for BART applies only to the first regional haze SIP. Facilities subject to BART must continue to comply with the BART provisions of section 51.308(e), as noted above. Periodic SIP revisions will assure that the statutory requirement of reasonable progress will continue to be met.

G. Consultation with States and Federal Land Managers (FLMs)

The RHR requires that states consult with FLMs before adopting and submitting their SIPs. 40 CFR 51.308(i). States must provide FLMs an opportunity for consultation, in person and at least 60 days prior to holding any public hearing on the SIP. This consultation must include the opportunity for the FLMs to discuss their assessment of impairment of visibility in any Class I area and to offer recommendations on the development of the RPGs and on the

development and implementation of strategies to address visibility impairment. Further, a state must include in its SIP a description of how it addressed any comments provided by the FLMS. Finally, a SIP must provide procedures for continuing consultation between the state and FLMS regarding the state's visibility protection program, including development and review of SIP revisions, five-year progress reports, and the implementation of other programs having the potential to contribute to impairment of visibility in Class I areas.

IV. What is EPA's Analysis of Ohio's Regional Haze Plan?

Ohio submitted its regional haze plan on March 11, 2011, which included revisions to the Ohio SIP to address regional haze.

A. Class I Areas

States are required to address regional haze affecting Class I areas within a state and in Class I areas outside the state that may be affected by that state's emissions. 40 CFR 51.308(d). Ohio does not have any Class I areas within the state. Ohio reviewed technical analyses conducted by MRPO and other regional planning organizations to determine what Class I areas outside the state are affected by Ohio emission sources. MRPO conducted both a back trajectory analysis and modeling to

determine the affects of its states' emissions. Ohio also used assessments by MANE-VU, the regional planning organization for Northeastern and Mid-Atlantic states and by VISTAS, the regional planning organization for Southeastern states. Finally, Ohio used a joint state assessment by Arkansas and Missouri. The conclusion from these five technical analyses is that Ohio emissions affect 15 Class I areas. The affected Class I areas are: Caney Creek and Upper Buffalo Wilderness Areas in Arkansas; Mammoth Cave in Kentucky; Acadia National Park and Moosehorn Wilderness Area in Maine; Hercules-Glades and Mingo Wilderness Areas in Missouri; Great Gulf Wilderness Area in New Hampshire; Brigantine Wilderness Area in New Jersey; Great Smoky Mountains National Park in North Carolina and Tennessee; Lye Brook Wilderness Area in Vermont; James River Face Wilderness Area and Shenandoah National Park in Virginia; and Dolly Sods/Otter Creek Wilderness Area in West Virginia. Ohio has thereby satisfied the requirement to identify the Class I areas it affects.

B. Baseline, Current, and Natural Conditions

The RHR requires Class I states to calculate the baseline and natural conditions for their Class I areas. Ohio does not have any Class I areas. Therefore, Ohio is not required to submit such calculations.

C. RPGs

Class I states must set RPGs that achieve reasonable progress toward achieving natural visibility conditions. Ohio does not have any Class I areas, so it does not need to set any RPGs. Ohio did consult with affected Class I states to ensure that it achieves its fair share of the overall emission reductions necessary to achieve the RPGs of Class I areas that it affects.

Ohio consulted with the FLMS during the development of its regional haze plan. Ohio submitted a draft of its regional haze plan to the FLMS on September 9, 2008. The FLMS provided comments on October 16, 2008. Ohio sent the FLMS a revised regional haze plan on December 29, 2008. Ohio revised its plan based on the initial comments. Ohio later held a public hearing on February 26, 2009, which also concluded the public comment. The Forest Service gave additional comments in a February 25, 2009, letter. A joint March 10, 2009, letter from the National Park Service and U.S. Fish and Wildlife Service also provided comments on Ohio's plan. Ohio has committed to continue to consult with the FLMS as it develops future SIP revisions and progress reports.

Ohio participated in meetings and on conference call with affected Class I states and RPOs. Ohio consulted with Minnesota and Michigan on their Class I areas. Ohio also participated in

MRPO's inter-RPO consultations. MANE-VU, the RPO for the Northeastern states, facilitated consultation between Ohio and Maine, New Hampshire, New Jersey, and Vermont. Ohio also consulted with Arkansas, Kentucky, Missouri, North Carolina, Tennessee, West Virginia, and Virginia.

Ohio included the MPRO technical support document (TSD) in its submission. In Section 5 of the TSD, MPRO assessed the reasonable progress using the four factors required by the RHR. The factors considered are the cost of compliance, time needed, energy and non-air impacts, and remaining useful life.

In analyzing the visibility benefits of existing programs, MPRO considered existing on-highway mobile source, off-highway mobile source, area source, power plant, and other point source programs. MPRO also included reductions from the since vacated CAIR in its analysis. Following the court vacatur of CAIR, MRPO performed an additional analysis intended to project air quality in the absence of CAIR. MPRO projected visibility in 2018 under three scenarios in this analysis. The first scenario reflected simple emissions growth from a baseline that reflects power plant emissions in 2007, prior to most of the emission controls pursuant to CAIR being installed. The second scenario added reductions for power plants controls that are enforceable under federal or state consent decrees, permits, or rules. The final

scenario also added power plant controls that the utilities anticipated installing, presumably under the expectation that EPA would issue a rule to replace CAIR, plus power plant controls representing BART where applicable. The MRPO analysis showed that many Class I areas, including those impacted by Ohio, will fail to meet the 2018 RPGs with the emission reductions resulting from CAIR.

Ohio believes that implementation of the existing control measures listed in section 10 of its regional haze plan is expected to provide its fair share of emission reductions that should allow affected Class I areas to meet the RPGs. However, CAIR is one of the existing control measures and the MRPO analysis shows emission reductions equivalent to the scale of CAIR are needed to meet RPGs. Reliance on CAIR as part of a state's LTS to achieve the state-adopted RPGs is discussed in section E of this notice.

D. BART

Ohio conducted a BART analysis using the criteria in the BART Guidance at 40 CFR 51.308(e) and Appendix Y to identify all of the BART-eligible sources, assess whether the BART-eligible sources are subject to BART and determine the BART controls. These criteria are: (1) one or more emissions units at the facility fit within one of the 26 categories listed in the BART

Guidelines; (2) emissions unit(s) was constructed on or after August 6, 1962, and was in existence prior to August 6, 1977; and (3) potential emissions of any visibility-impairing pollutant from subject units are 250 tons or more per year.

Ohio initially identified 39 BART-eligible sources, including 18 EGUs and 21 other facilities. Ohio did not consider EGUs in its analysis as it chose to meet BART requirements for EGUs for SO₂ and NO_x by participation in CAIR, and because the particulate matter emissions from EGUs were found not to warrant further control. Ohio found that 12 non-EGUs remained as potential BART sources after further screening. Ohio then used the modeling protocol MRPO developed to determine the sources subject to BART. MRPO conferred with its states, EPA, and the FLMS in developing its BART modeling protocol. Consistent with EPA guidance, the state used a 0.5 dv impact (98th percentile) as the threshold for a source to contribute to visibility impairment, concluding that such a threshold provided an appropriate means of identifying which sources cause sufficient visibility impairment to warrant being subject to BART. Ohio found that just one non-EGU facility was subject to BART, P.H. Glatfelter of Ross County.

Ohio performed a five factor BART determination of the Glatfelter facility. Glatfelter added NO_x controls to both units

in 2001 and 2003. Additional NO_x combustions controls are technically infeasible for tangentially fired boilers. Ohio determined that post-combustion control was unnecessary because additional NO_x reductions would have negligible visibility impact. Ohio concluded that operating the units at the current emission limits satisfies the BART requirement for NO_x.

Ohio evaluated several SO₂ control devices for the Glatfelter boilers. The BART determination process lead to narrowing the potential control devices down to three options- wet flue gas desulfurization (FGD), semi-dry FGD, and over-fire air (OFA) with a sorbent injection system (SIS). Ohio and MPRO conducted visibility modeling of the BART options. Modeling of the FGD controls indicates an average of less than one day with impairment over 0.5 dv at affected Class I sites, which does not contribute to visibility impairment. Both FGD controls are expected to achieve a 90 percent reduction in SO₂ emissions. The OFA/SIS option would reduce emissions by about 60 percent and yield modeling impacts over 0.5 dv on up to 7 days a year. Ohio selected semi-dry FGD as the BART SO₂ control, which is expected to reduce SO₂ emissions by 20,515 tons per year.

P.H. Glatfelter is subject to an alternative to BART. Ohio issued a permit on March 7, 2011, with the limitations on Glatfelter's Boilers 7 and 8. P.H. Glatfelter must operate its

PM control devices, cyclones and electrostatic precipitators, and its NO_x control devices, low-NO_x burners with over-fire air, on both units. The NO_x controls are to be operated all year instead of just the May 1 to September 30 control period. P.H. Glatfelter will add a control device, use alternate fuel, use low sulfur fuel, use a combination of measures, or permanently shut down a boiler to achieve a SO₂ emission limit of 24,930 pounds per calendar day. Ohio's permit specifies that this limit is for Boilers 7 and 8 combined. Continuous emission monitor systems will be used to measure the daily SO₂ emissions. P.H. Glatfelter will comply with the alternative to BART emission limits by December 31, 2014.

EPA is proposing to approve Ohio's alternative to BART limits for P.H. Glatfelter. Ohio is requiring P.H. Glatfelter to continue operation of its PM and NO_x controls. Modeling shows negligible visibility benefit for PM reductions. The BART determination indicated that additional NO_x control is unnecessary and Glatfelter will use its controls all year long. The SO₂ emission limit of 24,930 pounds per calendar day given to Boilers 7 and 8 in the permit are slightly more stringent than what Ohio determined as BART. The semi-dry FGD that Ohio selected as the BART SO₂ control would have an emission limit of 24,931 pounds SO₂ per day for both units. EPA is satisfied with

the limits because they are the as stringent as what Ohio determined to fulfill BART requirements. EPA proposes in particular to approve permit number P0103673 issued on March 7, 2011, that imposes these limitations on the P.H. Glatfelter facility.

Ohio used a cumulative modeling analysis by MRPO to determine that PM and VOC emissions will not cause or contribute to visibility impairment. The MRPO analysis of all point sources in the region showed a cumulative impact of less than 0.5 dv at any Class I area. PM and VOC emissions from just Ohio sources would be well less than from all states and even smaller when considering only 39 of those sources are BART-eligible. Ohio therefore concludes that PM and VOC emissions from its BART sources have a negligible visibility impact. Thus, it did not consider PM or VOC reductions in its BART determinations.

E. LTS

Under Section 169A(b)(2) of the CAA and 40 CFR 51.308(d), states regional haze programs must include a LTS for making reasonable progress toward meeting the national visibility goal. Ohio's LTS must address visibility improvement for the Class I areas impacted by Ohio sources. Section 51.308(d)(3) requires that Ohio consult with the affected states in order to develop a coordinated emission management strategy. A contributing state,

such as Ohio, must demonstrate that it has included, in its SIP, all measures necessary to obtain its share of the emissions reductions needed to meet the RPGs for the Class I areas affected by Ohio sources. As described in section III.E., the LTS is the compilation of all control measures Ohio will use to meet applicable RPGs. The LTS must include enforceable emissions limitations, compliance schedules, and other measures as necessary to achieve the RPGs for all Class I areas affected by Ohio emissions.

At 40 CFR 51.308(d)(3)(v), the RHR identifies seven factors that a state must consider in developing its LTS: (A) emission reductions due to ongoing programs, (B) measures to mitigate impact from construction, (C) emission limits to achieve the RPG, (D) replacement and retirement of sources, (E) smoke management techniques, (F) federally enforceable emission limits and control measures, and (G) the net effect on visibility due to projected emission changes over the LTS period. Ohio considered the seven factors in developing its LTS.

Ohio relied on MPRO's modeling and analysis along with its emission information in developing a LTS. Ohio consulted with Class I states through its participation in MRPO. MRPO facilitated consultations with other Midwest states and with states in other regions through inter-RPO processes. Ohio

considered the factors set out in 51.308(d)(3)(v) in developing its LTS. Based on these factors and the MRPO's technical analysis, in conjunction with RPGs that were set by the pertinent states in consultation with Ohio and other states, Ohio concludes that existing control programs adequately address Ohio's impact on Class I areas and suffice to meet their RPGs by 2018 by implementing the control programs already in place. These existing control programs include federal motor vehicle emission control program, reformulated gasoline, emission limits for area sources of VOCs, Title IV, the NO_x SIP Call, NO_x Reasonable Achievable Control Technology, Maximum Achievable Control Technology standards, and federal non-road standards for construction equipment and vehicles. These programs are fully enforceable, provide for the mitigation of new source impacts through new source permitting programs, and reflect appropriate consideration of current programs and prospective changes in emissions.

As noted in EPA's separate notice proposing revisions to the RHR (76 FR 82219, December 30, 2011), a number of states, including Ohio, fully consistent with EPA's regulations at the time, relied on the trading programs of CAIR to satisfy the BART requirement and the requirement for a LTS sufficient to achieve the state-adopted RPGs. In that notice, we proposed a limited

disapproval of Ohio's LTS based on its reliance on CAIR. Comments on that proposed determination may be directed to Docket ID No. EPA-HQ-OAR-2011-0729. We are proposing to find that the remaining elements of Ohio's LTS meet the requirements of the RHR.

F. Monitoring Strategy

Ohio's monitoring strategy relies on participation in the IMPROVE network. There is an IMPROVE Protocol monitoring site in Quaker City, Ohio. Ohio also runs a network of criteria pollutant monitors that provides data to analyze air quality problems including regional haze. Ohio is required under 40 CFR 51.308(d)(4) to have procedures for using the monitoring data to determine the contribution of emissions from within the state to affected Class I areas. Ohio developed procedures in conjunction with the MRPO. The procedures are detailed in the MRPO TSD. EPA finds that Ohio's regional haze plan meets the monitoring requirements for the RHR and that Ohio's network of monitoring sites is satisfactory to measure air quality and assess its contribution to regional haze.

G. Comments

Ohio took comments on its proposed regional haze plan. It held a public hearing on February 26, 2009, which concluded the public comment period. Ohio also received comments from the

FLMs as part of the consultation process. Evidence of the public notice and evidence of the public hearing were submitted to EPA.

Ohio provided the comments it received and its responses in a document within its regional haze plan. Ohio revised portions of its plan in response to comments. This includes emission limits on the non-EGU BART facility being tightened from Ohio's draft plan. Ohio has satisfied the requirements from 40 CFR Part 51, Appendix V to provide evidence that it gave public notice, took comments, and that it compiled and responded to comments.

V. What Action is EPA Taking?

EPA is proposing a limited approval of revisions to the Ohio SIP, submitted on March 11, 2011, addressing regional haze for the first implementation period. The revisions seek to satisfy CAA and regional haze rule requirements for states to remedy any existing anthropogenic and prevent future impairment of visibility at Class I areas.

EPA finds that Ohio's submission satisfies BART requirements for non-EGUs, most notably by providing new, tighter emission limits for the Glatfelter facility in Ross County, Ohio, Ohio's submission provides an approvable analysis of the emission reductions needed to satisfy reasonable progress

and other regional haze planning requirements, and Ohio's submission meets other regional haze planning requirements such as identification of affected Class I areas and provision of a monitoring plan. Because for these reasons Ohio's submission helps address regional haze planning requirements, EPA is also proposing limited approval of Ohio's submission for its SIP strengthening effect.

In a separate action, EPA has previously proposed a limited disapproval of the Ohio regional haze SIP because of deficiencies in the state's regional haze SIP submittal arising from the remand by the U.S. Court of Appeals for the District of Columbia (D.C. Circuit) to EPA of CAIR. 76 FR 82219, December 30, 2011. Consequently, we are not taking action in this notice to address the state's reliance on CAIR to meet certain regional haze requirements.

VI. Statutory and Executive Order Reviews.

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as

meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);

- is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and
- does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the state, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control,
Intergovernmental relations, Nitrogen dioxide, Particulate
matter, Reporting and recordkeeping requirements, Sulfur oxides,
Volatile organic compounds.

Dated: January 17, 2012.

Susan Hedman,
Regional Administrator, Region 5.

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